


# CHADA Villas of Al Omrane Group / New Town Lakhiayt

by Kamal MALTOUFI / 2018-05-26 16:03:19 / Maroc / 10045 / FR

**New Construction**



**Primary energy need :**

40 kWhep/m<sup>2</sup>.an

(Calculation method : RTCM )

**ENERGY CONSUMPTION**

*Economical building*

< 50	<b>A</b>
51 à 90	<b>B</b>
91 à 150	<b>C</b>
151 à 230	<b>D</b>
231 à 330	<b>E</b>
331 à 450	<b>F</b>
> 450	<b>G</b>

*Energy-intensive building*

*Building*

**A**

**Building Type** : Terraced Individual housing  
**Construction Year** : 2017  
**Delivery year** : 2018  
**Address 1 - street** : Pôle Urbain et Industriel Omrane Sahel 26402 HAD SOUALEM, Maroc  
**Climate zone** : [BWk] Mid-latitude Dry Arid (Desert)

**Net Floor Area** : 224 m<sup>2</sup>  
**Construction/refurbishment cost** : 140 000 €  
**Number of Dwelling** : 1 Dwelling  
**Cost/m2** : 625 €/m<sup>2</sup>

## General information

The "Villas CHADA" project is one of the first projects in Morocco to respect the new national thermal regulations (RTCM). Indeed, it is distinguished by its thermal and acoustic efficiency, its hot water production by solar panels, and a photovoltaic installation that can supply the network of the house, remaining independent of the electrical circuit.

### Data reliability

Assessor

## Stakeholders

### Contractor

Name : Al Omrane Lakhiayt

Contact : Kamal MALTOUFI : 06 78 88 84 98 email : k.maltoufi@alomrane.gov.ma

<http://www.alomrane.gov.ma/>

## Construction Manager

Name : KABBAJ architecte

## Stakeholders

Function : Contractor

Holding Al Omrane

## Owner approach of sustainability

As part of the group's sustainable development policy, Al Omrane Lakhiayta is committed to building the "Villas CHADA" pilot project in energy efficiency and will become one of the first projects to comply with the new RTCM thermal regulation.

## Energy

### Energy consumption

Primary energy need : 40,00 kWhp/m<sup>2</sup>.an

Primary energy need for standard building : 193,00 kWhp/m<sup>2</sup>.an

Calculation method : RTCM

CEEB : 0.0011

### Envelope performance

More information :

The integration of the Orobrique KASBAH System thermal brick (type: base part) at the level of the external partitions.

## Renewables & systems

### Systems

Heating system :

- No heating system

Hot water system :

- Solar Thermal

Cooling system :

- Solar cooling

Ventilation system :

- Natural ventilation

Renewable systems :

- Solar photovoltaic

Renewable energy production : 99,00 %

## Environment

### GHG emissions

GHG in use : 5,00 KgCO<sub>2</sub>/m<sup>2</sup>/an

GHG before use : 20,00 KgCO<sub>2</sub> /m<sup>2</sup>

Building lifetime : 30,00 an(s)

, ie xx in use years : 4

## Indoor Air quality

A very neat architectural design with large openings and bay windows allowing optimal natural ventilation and a quality of holy air.

## Comfort

### Health & comfort :

The project favors the following elements:

- South orientation for day rooms;
- Terracotta brick for interior walls that receive winter solar radiation;
- Provide in the North the rooms with little heat;
- Group night rooms that are less heated in general.

### Acoustic comfort :

An acoustic comfort higher than 54 dBA.

## Products

### Product

Thermal brick KASBAH System

OROBRIQUE

Km 22 route de Khouribga - Riah - BP. 434 - 26100 Berrechid

<http://www.robrique.ma/>

Product category : Gros œuvre / Structure, maçonnerie, façade

The outer casing of the villas is made in single wall with thermal brick terracotta "Kasbah system", optimizing the thermal comfort ( $U = 0.7$ ) and acoustic (54dBA) villas.

Very interesting product in thermal and acoustic insulation.



## Costs

## Urban environment

Spread over an area of 50,000 m<sup>2</sup>, the project "Villa CHADA", is located in the third phase of the urban and industrial pole Al Omrane Sahel and well served directly by the Highway and the National Road No. 1 (Casa-El Jadida). It consists of 108 finished villas, 2 amenities of general interest and 2 spaces of games & sports and green spaces.

Common green space in the project = 1123 m<sup>2</sup> (knowing that the project is located in front of a green leisure area of 2.3ha and an existing forest of 40 ha).

## Green space

Green space : 1 128,00

## Building Environmental Quality

### Building Environmental Quality

- indoor air quality and health
- acoustics
- energy efficiency
- renewable energies
- products and materials

### Building candidate in the category



Energie & Climats Chauds



Coup de Cœur des Internautes

